DETAILED ESTIMATE

For the Work of

"Improvements and Restoration of Roads at Bharatnagar, Amarjyoti layout, Fatima Layout, Baloon factory and swith factory cross roads and Other Roads in Ward No 06, Byatarayanpura Sub Division"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Improvements and Restoration of Roads at Bharatnagar, Amarjyoti layout, Fatima Layout, Baloon factory and swith factory cross roads and Other Roads in Ward No 06, Byatarayanpura Sub Division

								Estimation Cost.Rs	10000000.00
Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications(P.No-143 &136 ,I No-19.1&17.4& 17.1) 5km lead= 57+2.0x1.28x5 =69.80								
	For Drain	**Cum**							
	Fatima layout								
	(W1387)		1	175.00	0.90	0.90	141.75		
	For Culvert								
	Cross Road		1	5.50	1.50	0.95	7.84		
	Drain Desilt								
	Bharat Nagar								
	(W1387)		1	154.00	0.55	0.50	42.35		
	Kirubai Store (W0954)		1	92.00	0.55	0.50	25.30		
	(W0962)		1	91.70	0.50	0.40	18.34		
	(W0800)		1	94.00	0.55	0.50	25.85		
	Basic rate	130.00							
	Area weightage 6%	7.80							
	5Km lead & Lift= 57+(2*1.28*5)	69.80							
	Sub Total	**207.60**							
	Total						**261.43**	**207.60**	**54273.00**
2	**Removing and refixing** stone slabs of drains and pointing in CM (1:3) (P.No-27,I No-5.33)								
		Sqm							
	BS slab of Drain								
	Open Drain (Sides & Bottom)	**Sqm**	Width=Perimeter of Drain in U Shape						
	Bharat Nagar								
	(W1387)		1	154.00	1.80		277.20		
	Kirubai Store (W0954)		1	92.00	1.80		165.60		
	(W0962)		1	91.70	1.35		123.80		
	(W0800)		1	94.00	1.80		169.20		
						Total	**735.80**		
	Deduct 20% for Missing/Damaged						**147.16**		
	Consider 80% Qnty for Removing & Refixing						**588.64**		
	Basic rate	105.00							
	Area weightage 6%	6.3							
	Sub Total	**111.30**							
	Total						**588.64**	**111.30**	**65516.00**
3	Providing granite slabs of selected quality roughly dressed havinf a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.(P.No.27,I.No.5.31.1)								
		Sqm							
	Provide 20% new BS Slab for Missing/Damaged	From item no.3					**147.16**		
	Basic rate	700.00							
	Area weightage 6%	42							
	Sub Total	**742.00**							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Total						**147.16**	**742.00**	**109192.00**
4	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.13, I.No. 4.3)								
	For CC Road	**Cum**							
	Cross Road-1		1	26.00	4.00	0.15	15.60		
	Cross Road-2		1	26.00	4.00	0.15	15.60		
	Cross Road-3		1	30.00	4.00	0.15	18.00		
	For Drain								
	(W1387)		1	175.00	0.90	0.15	23.63		
	For Culvert								
	Cross Road		1	5.50	1.50	0.15	1.24		
	Basic rate	5301.69							
	Area weightage 6%	318.10							
	Sub Total	**5619.79**							
	Total						**74.06**	**5619.79**	**416216.00**
5	Providing laying plain/ reinforced cement concrete for side Drains Using M20 nominal mix Concrete with OPC at 300kgs.With 20mm and Down size granite metal coarse aggregate at 0.69cum and fine aggregate at 0.43cum Machne mixed, well compacted for wall and Bottom including centering shuttering,cost of materials,HOM of Machinery,Curing Etc.,Complete Excluding cost of Steel as per morth MORTH specification No. 1500, 1700, 2200. Including Cost of material, Labour, HOM complete as per Specification-WALL & Bottom thickness 15Cm(Item No 37.59.2 page no 271)								
	Drain Bottom Raft	**Cum**							
	Fatima layout								
	(W1387)		1	175.00	0.75	0.15	19.69		
	Drain Side Walls								
	Fatima layout								
	(W1387)		2	175.00	0.15	0.60	31.50		
					Sub Total		**51.19**		
	Culvert Bottom Raft								
	Cross Road		1	5.40	1.30	0.20	1.40		
	Culvert Side Walls								
	Cross Road		2	5.40	0.30	0.60	1.94		
					Sub Total		**3.35**		
	Basic rate	7002.82							
	Area weightage 6%	420.17							
	Sub Total	**7422.99**							
	Total						**54.54**	**7422.99**	**404817.00**
6	KSRB M2200-6 Providing T.M.T bars Fe 500 steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. MORTH Specification NO.1600&2200Specification No. Pg No.229 Item No.28.8.2								
	For Drain	Cum	From Item No.03				51.19		
		kg	Steel assumed 60Kg/Cum of Concrete				3071.25		
		tonne					**3.07**		
	For Culvert	Cum	From Item No.05				3.35		
		kg	Steel assumed 90Kg/Cum of Concrete				301.32		
		tonne					**0.30**		
		tonne							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Basic rate	75610							
	Area weightage 6%	4536.6							
	Sub Total	**80146.60**							
	Total						**3.37**	**80146.60**	**270301.00**
7	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting ,including form work,curing,including cost of alll materials, labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc ,copmplete. (Data Rate)								
	Road	**Sqm**							
	Fatima layout								
	(W1387)		1	175.00	0.75		131.25		
	Data rate	**1922.00**							
	Total						**131.25**	**1922.00**	**252263.00**
8	Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge								
	Road	**Sqm**							
	#REF!								
	Cross Road		1	5.40	1.20		6.48		
	Data rate	**5418.00**							
	Total						**6.48**	**5418.00**	**35109.00**
9	KSRRB M300-14. **Excavation for roadwork in all types of soil** by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications MORTH Specificatio MORTH Specification No.301Loading and unloading with 5km lead= (I No-19.14,P No-143)								
	CC Road	**Cum**							
	Cross Road-1		1	26.00	4.00	0.30	31.20		
	Cross Road-2		1	26.00	4.00	0.30	31.20		
	Cross Road-3		1	30.00	4.00	0.30	36.00		
	Sanitary Line								
	(W1387)		1	175.00	1.20	0.60	126.00		
	(W0798)		1	86.00	1.20	0.60	61.92		
	Bharat Nagar								
	(W1387)		1	154.00	1.20	0.60	110.88		
	Kirubai Store (W0954)		1	92.00	1.20	0.60	66.24		
	(W0962)		1	91.70	1.20	0.60	66.02		
	(W0800)		1	94.00	1.20	0.60	67.68		
	Cross Road		1	150.00	1.20	0.60	108.00		
	Water Supply Line								
	(W1387)		1	175.00	1.00	0.60	105.00		
	(W0798)		1	86.00	1.00	0.60	51.60		
	Bharat Nagar								
	(W1387)		1	154.00	1.00	0.60	92.40		
	Kirubai Store (W0954)		1	92.00	1.00	0.60	55.20		
	(W0962)		1	91.70	1.00	0.60	55.02		
	(W0800)		1	94.00	1.00	0.60	56.40		
	Cross Road		1	150.00	1.00	0.60	90.00		
	Basic rate	41.00							
	Area weightage 6%	2.46							
	5Km lead= (2*1.28*5)	12.80							
	Sub Total	**56.26**							
	Total						**1210.76**	**56.26**	**68118.00**
10	Supplying and laying Sand / Crushed Sand (Page No III Sl. No. 51 PWD SR 2018-2019)								
	Road	**Cum**							
	Sanitary Line								

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	(W1387)		1	175.00	1.20	0.30	63.00		
	(W0798)		1	86.00	1.20	0.30	30.96		
	Bharat Nagar								
	(W1387)		1	154.00	1.20	0.30	55.44		
	Kirubai Store (W0954)		1	92.00	1.20	0.30	33.12		
	(W0962)		1	91.70	1.20	0.30	33.01		
	(W0800)		1	94.00	1.20	0.30	33.84		
	Cross Road		1	150.00	1.20	0.30	54.00		
	Water Supply Line								
	(W1387)		1	175.00	1.00	0.30	52.50		
	(W0798)		1	86.00	1.00	0.30	25.80		
	Bharat Nagar								
	(W1387)		1	154.00	1.00	0.30	46.20		
	Kirubai Store (W0954)		1	92.00	1.00	0.30	27.60		
	(W0962)		1	91.70	1.00	0.30	27.51		
	(W0800)		1	94.00	1.00	0.30	28.20		
	Cross Road		1	150.00	1.00	0.30	45.00		
	Basic rate	**1680.95**							
	Total						**556.18**	**1680.95**	**934915.00**
11	KSRRB 300-64.1. Extra for watering the earth to bring the earth upto required optimum moisture content manually including cost of all labour complete as per specifications. (Page No. 148/ Item No. 19.71 PWD SR 2018-19)								
	Road	**Cum**							
	Sanitary Line								
	(W1387)		1	175.00	1.20	0.30	63.00		
	(W0798)		1	86.00	1.20	0.30	30.96		
	Bharat Nagar								
	(W1387)		1	154.00	1.20	0.30	55.44		
	Kirubai Store (W0954)		1	92.00	1.20	0.30	33.12		
	(W0962)		1	91.70	1.20	0.30	33.01		
	(W0800)		1	94.00	1.20	0.30	33.84		
	Cross Road		1	150.00	1.20	0.30	54.00		
	Water Supply Line								
	(W1387)		1	175.00	1.00	0.30	52.50		
	(W0798)		1	86.00	1.00	0.30	25.80		
	Bharat Nagar								
	(W1387)		1	154.00	1.00	0.30	46.20		
	Kirubai Store (W0954)		1	92.00	1.00	0.30	27.60		
	(W0962)		1	91.70	1.00	0.30	27.51		
	(W0800)		1	94.00	1.00	0.30	28.20		
	Cross Road		1	150.00	1.00	0.30	45.00		
	Basic rate	12.00							
	Area weightage 6%	0.72							
	Sub Total	**12.72**							
	Total						**556.18**	**12.72**	**7075.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
12	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Chapter 3(P.No.146, I.No.19.56)								
	Road	**Sqm**							
	(W1387)		1	175.00	5.40		945.00		
	(W0798)		1	86.00	5.30		455.80		
	Bharat Nagar								
	(W1387)		1	154.00	4.80		739.20		
	Kirubai Store (W0954)		1	92.00	5.40		496.80		
	(W0962)		1	91.70	4.80		440.16		
	(W0800)		1	94.00	5.10		479.40		
	Cross Road		1	150.00	5.00		750.00		
	Basic rate	39.00							
	Area weightage 6%	2.34							
	Sub Total	**41.34**							
	Total						**4306.36**	**41.34**	**178025.00**
13	KSRRB 300-58. **Compaction of original ground** by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.(I No-19.64,P No-147)								
	Asphalt Road	**Sqm**							
	(W1387)		1	175.00	5.40		945.00		
	(W0798)		1	86.00	5.30		455.80		
	Bharat Nagar								
	(W1387)		1	154.00	4.80		739.20		
	Kirubai Store (W0954)		1	92.00	5.40		496.80		
	(W0962)		1	91.70	4.80		440.16		
	(W0800)		1	94.00	5.10		479.40		
	Cross Road		1	150.00	5.00		750.00		
	CC Road								
	Cross Road-1		1	26.00	4.00		104.00		
	Cross Road-2		1	26.00	4.00		104.00		
	Cross Road-3		1	30.00	4.00		120.00		
	Basic rate	6.00							
	Area weightage 6%	0.36							
	Sub Total	**6.36**							
	Total						**4634.36**	**6.36**	**29475.00**
14	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)								
	Road	**Cum**							
	(W1387)		1	175.00	5.40	0.20	189.00		
	(W0798)		1	86.00	5.30	0.20	91.16		
	Bharat Nagar								
	(W1387)		1	154.00	4.80	0.20	147.84		
	Kirubai Store (W0954)		1	92.00	5.40	0.20	99.36		
	(W0962)		1	91.70	4.80	0.20	88.03		
	(W0800)		1	94.00	5.10	0.20	95.88		
	Cross Road		1	150.00	5.00	0.20	150.00		
	Sanitary Line								
	(W1387)		1	175.00	1.20	0.25	52.50		
	(W0798)		1	86.00	1.20	0.25	25.80		
	Bharat Nagar								
	(W1387)		1	154.00	1.20	0.25	46.20		
	Kirubai Store (W0954)		1	92.00	1.20	0.25	27.60		
	(W0962)		1	91.70	1.20	0.25	27.51		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	(W0800)		1	94.00	1.20	0.25	28.20		
	Cross Road		1	150.00	1.20	0.25	45.00		
	Water Supply Line								
	(W1387)		1	175.00	1.00	0.25	43.75		
	(W0798)		1	86.00	1.00	0.25	21.50		
	Bharat Nagar								
	(W1387)		1	154.00	1.00	0.25	38.50		
	Kirubai Store (W0954)		1	92.00	1.00	0.25	23.00		
	(W0962)		1	91.70	1.00	0.25	22.93		
	(W0800)		1	94.00	1.00	0.25	23.50		
	Cross Road		1	150.00	1.00	0.25	37.50		
	Basic rate	1888.00							
	Area weightage 6%	113.28							
	Sub Total	**2001.28**							
	Total						**1324.76**	**2001.28**	**2651210.00**
15	KSRRB M500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)								
	Road	**Sqm**							
	(W1387)		1	175.00	5.40		945.00		
	(W0798)		1	86.00	5.30		455.80		
	Bharat Nagar								
	(W1387)		1	154.00	4.80		739.20		
	Kirubai Store (W0954)		1	92.00	5.40		496.80		
	(W0962)		1	91.70	4.80		440.16		
	(W0800)		1	94.00	5.10		479.40		
	Cross Road		1	150.00	5.00		750.00		
	Basic rate	32.00							
	Area weightage 6%	1.92							
	Sub Total	**33.92**							
	Total						**4306.36**	**33.92**	**146072.00**
16	KSRRB 500-11. Providing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by smooth wheeled, vibratory & tandem rollers to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH								
	Road	**Cum**							
	(W1387)		1	175.00	5.40	0.05	47.25		
	(W0798)		1	86.00	5.30	0.05	22.79		
	Bharat Nagar								
	(W1387)		1	154.00	4.80	0.05	36.96		
	Kirubai Store (W0954)		1	92.00	5.40	0.05	24.84		
	(W0962)		1	91.70	4.80	0.05	22.01		
	(W0800)		1	94.00	5.10	0.05	23.97		
	Cross Road		1	150.00	5.00	0.05	37.50		
	Basic rate	5533.00							
	Area weightage 6%	331.98							
	Sub Total	**5864.98**							
	Total						**215.32**	**5864.98**	**1262836.00**
17	KSRRB 500-7. Providing and **applying tack coat** using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7)								
	Road	**Sqm**							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	(W1387)		1	175.00	5.40		945.00		
	(W0798)		1	86.00	5.30		455.80		
	Bharat Nagar								
	(W1387)		1	154.00	4.80		739.20		
	Kirubai Store (W0954)		1	92.00	5.40		496.80		
	(W0962)		1	91.70	4.80		440.16		
	(W0800)		1	94.00	5.10		479.40		
	Cross Road		1	150.00	5.00		750.00		
	Basic rate	12.00							
	Area weightage 6%	0.72							
	Sub Total	**12.72**							
	Total						**4306.36**	**12.72**	**54777.00**
18	KSRRB M500-19. Providing and laying **bituminous concrete** using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 507 of MORTH V revision using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-ll (30 mm to 45 mm) with 5.4% VG-30 Bitumen(P.No-162,I No-21.22.6)								
	Road	**Cum**							
	(W1387)		1	175.00	5.40	0.04	37.80		
	(W0798)		1	86.00	5.30	0.04	18.23		
	Bharat Nagar								
	(W1387)		1	154.00	4.80	0.04	29.57		
	Kirubai Store (W0954)		1	92.00	5.40	0.04	19.87		
	(W0962)		1	91.70	4.80	0.04	17.61		
	(W0800)		1	94.00	5.10	0.04	19.18		
	Cross Road		1	150.00	5.00	0.04	30.00		
	Basic rate	7972.00							
	Area weightage 6%	478.32							
	Sub Total	**8450.32**							
	Total						**172.25**	**8450.32**	**1455605.00**
19	KSRRB M800-13.**Road Marking with Hot Applied Thermoplastic Compound** with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)								
	Road	**Sqm**							
	(W1387)		2	175.00	0.10		35.00		
	(W0798)		2	86.00	0.10		17.20		
	Bharat Nagar								
	(W1387)		2	154.00	0.10		30.80		
	Kirubai Store (W0954)		2	92.00	0.10		18.40		
	(W0962)		2	91.70	0.10		18.34		
	(W0800)		2	94.00	0.10		18.80		
	Cross Road		2	150.00	0.10		30.00		
	Basic rate	429.00							
	Area weightage 6%	25.74							
	Sub Total	**454.74**							
	Total						**168.54**	**454.74**	**76642.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
20	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, using a grade concrete M30 over a prepared base with OPC coarse aggregate @ 0.69cum fine aggregate @ 0.46cum,coarse and fine aggregate confirming to IS:383-2016,with superplastisiser @3lts confirming to IS9103-2008mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine,and curing including cost of all materials,labour,hire chargedof machines,all lead and lift charges etc., complete as per specifications. - do with OPC at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum Pg No.176Item No.22.6.1								
	Road	**Cum**							
	Cross Road-1		1	26.00	4.00	0.15	15.60		
	Cross Road-2		1	26.00	4.00	0.15	15.60		
	Cross Road-3		1	30.00	4.00	0.15	18.00		
	Basic rate	5315.38							
	Area weightage 6%	318.9228							
	Sub Total	**5634.30**							
	Total						**49.20**	**5634.30**	**277208.00**
								Grand Total	**8749645.00**
								DPR Charges (1% of estimated cost)	**100000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**100000.00**
								GST Charges (12% of estimated cost)	**1049958.00**
								Miscellenious and rounding	**397.00**
								Total Amount	**10000000.00**
									RUPEES ONE CRORE ONLY

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019,Issue rates and Data Rates.

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Executive Engineer
BBMP

RUDRAPRASAD CONSULTANTS
BANGALORE